



Heatwaves in Vienna: Effects on mortality

Author(s): Hutter HP, Moshhammer H, Wallner P, Leitner B, Kundi M
Year: 2007
Journal: Wiener Klinische Wochenschrift. 119 (8-Jul): 223-227

Abstract:

Background: The hot summer of 2003 brought about increased mortality in southern and western Europe, highlighting the health impact of heatwaves. No Austrian mortality data have yet been reported for this summer period. Methods: Daily mortality data for Vienna between 1998 and 2004 were obtained from Statistics Austria and meteorological data from the Austrian Central Institute for Meteorology and Geodynamics. Heatwaves were defined using the Kysely criterion. Daily mortality for May to September was predicted by a generalized additive model considering over- dispersion with Poisson deviates and a log link. Seasonal trend was accounted for by a natural spline, weekdays were modeled by dummy variables and heatwave days were included as dichotomous predictor. Results: The average seasonal temperature for May to September in Vienna has increased by more than 1.7 C during the last 35 years. In 2003 there was an excess of heatwave days, 44 overall, that resulted in an increased number of deaths, approximately 180, most of which were not due to 'harvesting'. Heatwave days between 1998 and 2004 were associated with a significantly increased relative mortality risk of 1.13 [95% confidence interval 1.09 - 1.17]. This increase was stronger in females than in males. Although excess mortality was seen in all age groups, it reached significance only in the elderly population over 65 years. Discussion: An impact of heatwaves on mortality was apparent in Vienna, although not as pronounced as in France and south- western Europe. In 2003 at least 130 heatwave- related deaths in Vienna could have been avoided by prompt medical assistance and proper advice about how to cope with excessive thermal conditions. Preventive programs are warranted during heatwaves, especially to target elderly people, because the likelihood of heatwaves as a consequence of global warming is increasing.

Source: <http://dx.doi.org/10.1007/s00508-006-0742-7>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Climate Change and Human Health Literature Portal

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Austria

Health Impact:

specification of health effect or disease related to climate change exposure

Injury, Other Health Impact

Other Health Impact: heat related mortality

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified